REMARKS

Claims 1-10 and 12-19 are pending in this application. By this Amendment, claim 10 is amended and claim 11 is canceled. Claim 10 is amended to incorporate the limitations of claim 11. No new matter is added. The amendments are supported by the specification and original claims.

I. Rejection Under 35 U.S.C. §102(b)

Claim 10 was rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,206,192 (hereinafter Dransfield). This rejection is respectfully traversed.

The Patent Office asserts that Dransfield discloses a composition comprising particulate zirconia in which the particles are coated with hydrous oxide of cerium. The Examiner asserts that the language "metal oxide particles having cores comprising larger molar amounts of zirconia than of ceria, and surface layers comprising larger molar amounts of ceria than zirconia" in claim 10 appears to read on the ceria coated zirconia of Dransfield.

In an effort to expedite prosecution, claim 10 is amended to recite that the metal oxide particles carry a noble metal. Nowhere does Dransfield disclose metal oxide particles carrying a noble metal as recited in claim 10 of the present application.

For the foregoing reasons, Applicant respectfully submits that Dransfield fails to anticipate the subject matter of claim 10. Reconsideration and withdrawal of this rejection are respectfully requested.

II. Rejection Under 35 U.S.C. §103(a)

Claims 1-9 and 11-19 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Dransfield taken together with U.S. Patent 5,945,369 (hereinafter Kimura).

Claims 1 and 10

Claim 1 recites an exhaust gas purifying catalyst comprising metal oxide particles comprising ceria and zirconia, and a noble metal carried by the metal oxide particles, wherein

the metal oxide particles have cores comprising larger molar amounts of zirconia than of ceria, and surface layers comprising larger molar amounts of ceria than of zirconia. Claim 10 recites metal oxide particles carrying a noble metal.

The Patent Office alleges that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a noble metal onto the composition of Dransfield in order to achieve a useful catalyst because noble metal is a known and useful catalyst material for treating exhaust gases as evidenced by Kimura.

However, Dransfield relates to a metal oxide suitable for use in the manufacturing of ceramics and ceramic products. See col. 1, line 66 to col. 2, line 3. Dransfield does not teach or suggest that the metal oxide particles may be used as an exhaust gas catalyst material, or that the particles have any properties making the particles suitable for use as catalysts in an exhaust gas embodiment. As such, there is no motivation to have led one to have used the ceramic-making particles of Dransfield for exhaust gas purification by loading a noble metal thereon as in the present application.

Kimura does not remedy the deficiencies of Dransfield. Kimura describes an exhaust gas purifying catalyst that includes, among other elements, a noble metal loaded onto a porous support. The porous support may be alumina, silica, silica-alumina, zirconia or titania. See claim 3. Kimura thus does not teach or suggest the use of metal oxide particles comprised of ceria and zirconia as in claims 1 and 10 with a noble metal thereon. Accordingly, Kimura does not teach or suggest including a noble metal on metal oxide particles of ceria and zirconia. Nothing in Kimura would have led one to have included a noble metal on the different ceramic-making metal oxide particles of Dransfield for any reason.

There simply is no teaching or suggestion in either Dransfield or Kimura to have led one to have added a noble metal to the ceramic-making particles of Dransfield, as (1) noble

metals are not taught to be necessary to ceramic-making with Dransfield's particles and (2) the ceramic-making particles of Dransfield are not indicated to have utility as exhaust gas purifying catalysts. There is nothing suggesting a reasonable expectation of success in the alleged combination.

According to MPEP §2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention if there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In this case, as discussed above, neither Dransfield nor Kimura teaches any motivation to combine the two references or otherwise derive the claimed invention as detailed above.

Neither Dransfield nor Kimura, alone or in combination, teach or suggest an exhaust gas purifying catalyst as recited in claims 1-9, 10 and 16. Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 12

Claim 12 recites a method for preparing metal oxide particles, with the metal oxide particles having cores comprising larger molar amounts of zirconia than of ceria, and surface layers comprising larger molar amounts of ceria than of zirconia, wherein the method comprises preparing a solution comprising zirconia sol and ceria sol, adjusting the pH of the solution within ±0.5 on the basis of the isoelectric point of zirconia and aggregating zirconia and then aggregating ceria around the aggregated zirconia from the solution to make aggregates.

The Patent Office alleges that Dransfield discloses the claimed process of preparing the metal oxide particles, except for specifically reciting adjusting the pH of the solution. However, the Patent Office further alleges that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have optimized such pH values.

The method of Dransfield is different from the present claims. Dransfield forms the zirconium oxide as the base material by vapor phase oxidation/hydrolysis of a vaporized zirconium compound. After the zirconia particles are prepared by vapor phase oxidation, the formed particles are then treated with the cerium that is applied, for example, as a coating to the already separately formed zirconium particles. Dransfield does not aggregate the zirconia and ceria from a same solution containing both zirconia and ceria together as in present claim 12. Instead, Dransfield separately forms the zirconia and ceria coatings. For example, see column 3, lines 3-28 of Dransfield. As Dransfield applies ceria separately from the already formed zirconia and does not have both the zirconia and ceria together in a same solution, it would not have been obvious to have adjusted the pH as alleged by the Patent Office, nor would doing so have arrived at the claimed method.

Nowhere does Dransfield teach or suggest aggregating zirconia and then aggregating ceria around the aggregated zirconia from a solution containing both zirconia and ceria as recited in claim 12.

Kimura does not remedy the deficiencies of Dransfield. Specifically, Kimura also does not teach or suggest the method for preparing metal oxide particles of the present application.

Therefore, neither Dransfield nor Kimura, alone or in combination, teach or suggest a method for preparing metal oxide particles as recited in claim 12 or claims 13-15 and 17-19 dependent therefrom. Reconsideration and withdrawal of this rejection are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-10 and 12-19 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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